

Abstract

~~INTEGRATED CIRCUIT WITH READOUT DIODE OF VERY SMALL DIMENSIONS~~

The invention relates to integrated circuits comprising both conductive gates deposited above a semiconductor substrate and a diode is formed between two electrodes. In order to achieve a diode of very small dimensions, the following procedure is adopted: producing the electrodes (ELn, GRST, then thermally oxidizing the electrodes, then exposing the surface of the substrate between the electrodes, then the following operations:

[[a]] depositing doped polycrystalline silicon in order to form one pole $\llbracket(42)\rrbracket$ of the diode, the substrate forming the other pole, [[b]] delimiting a desired silicon pattern $\llbracket(14),\rrbracket$ covering the space left between the electrodes and also covering a region lying outside this space, [[c]] depositing an insulating layer $\llbracket(18)\rrbracket$, locally etching an opening into this insulating layer above the polycrystalline silicon outside the space lying between the electrodes, in order to form an offset contact zone, depositing a metal layer and etching the metal layer.

~~The main application envisaged is the readout diode of a CCD-type readout register.~~

~~Figure for the abstract: Figure 3~~